

# **OIL POLLUTION ABATEMENT (OPA) EQUIPMENT ADVISORY**

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SUBJ: OIL POLLUTION ABATEMENT (OPA) EQUIPMENT ADVISORY

REF A: OPNAVINST 5090.1B

REF B: NAVSEA RMG 200348ZJAN98

1. SUMMARY: THIS MESSAGE ADDRESSES THE NAVY OIL POLLUTION ABATEMENT PROGRAM AND PROVIDES RECOMMENDATIONS TO ENABLE RELIABLE OPERATION OF OIL WATER SEPARATORS (OWS) AND OIL CONTENT MONITORS (OCM).

2. BACKGROUND: IAW REF A, THE NAVY HAS ESTABLISHED THE OIL POLLUTION ABATEMENT (OPA) PROGRAM TO LIMIT THE DISCHARGE OF OIL FROM NAVAL SHIPS AND CRAFT IN COMPLIANCE WITH INTERNATIONAL, FEDERAL, STATE, AND LOCAL REGULATIONS. AS PART OF THE NAVY'S PROGRAM, OWS'S AND OCM'S HAVE BEEN INSTALLED ON MOST NAVY SHIPS.

3. IAW REF A, NAVY SHIPS EQUIPPED WITH AN OWS AND OCM SHALL ATTEMPT TO LIMIT OIL AND OILY DISCHARGES TO 15 PPM OF OIL WORLDWIDE. OWS SYSTEMS WILL ROUTINELY PRODUCE AN OUTPUT OF LESS THAN 15 PPM IF OPERATING PROPERLY AND IF THE OILY WASTE DOES NOT CONTAIN DETERGENTS OR EMULSIFYING AGENTS OR SOLID MATTER WHICH CAN CLOG THE SEPARATOR PLATES. SURFACE SHIPS WITH OWS'S BUT WITHOUT OCM'S SHALL PROCESS ALL MACHINERY SPACE BILGE WATER THROUGH AN OWS SYSTEM BEFORE DISCHARGE. SURFACE SHIPS WITHOUT AN OWS BUT WITH AN OILY WASTE HOLDING TANK (OWHT) SHALL DIRECT ALL OILY BILGE WATER TO THE OWHT FOR SHORE DISPOSAL. SURFACE SHIPS WITH NEITHER AN OWS OR OWHT SHALL RETAIN ALL OILY BILGE WATER FOR SHORE DISPOSAL. DISCHARGES ARE PERMITTED BEYOND 50NM FROM THE NEAREST LAND FOR SHIPS WITHOUT AN OWS OR OWHT IF OPERATING CONDITIONS ARE SUCH THAT OILY BILGE WATER DISCHARGE MUST BE DISPOSED OF AT SEA. NOTE THAT DISCHARGES BEYOND 50NM ARE ONLY FOR THOSE SHIPS WITHOUT AN OWS OR OWHT AND THEN ONLY IF OPERATING CONDITIONS DO NOT PERMIT ONBOARD RETENTION. FOR ALL OTHER SHIPS, DISCHARGE OF THE WOT (WASTE OIL TANK), OWHT, AND ANY OTHER OILY WASTE BEYOND 50NM IS PROHIBITED.

4. EXEMPTIONS TO THE REQUIREMENTS ABOVE ARE PROVIDED IN REF A AND COVER CIRCUMSTANCES SUCH AS INOPERABLE OPA EQUIPMENT, REMOTE SPACE OILY WASTE DISCHARGE, DISCHARGES TO PREVENT MACHINERY OR OPA EQUIPMENT DAMAGE, AND EMERGENCIES.

5. SHIPS EQUIPPED WITH AN OWS AND OCM MAY USE THEM IN MOST PORTS. CONSULT WITH SUPPORTING SHORE FACILITY HOST COMMAND FOR DISCHARGE REQUIREMENTS. THE STANDARDS OF MOST PORTS CAN BE MET WITH PROPERLY FUNCTIONING OPA EQUIPMENT.

6. TO ENABLE OWS'S TO PERFORM MORE EFFECTIVELY, BILGE CLEANERS OR CHEMICAL AGENTS THAT PROMOTE STABLE CHEMICAL EMULSIONS SHALL NOT BE USED. IAW REF A, SHORT-LIVED DETERGENTS SHALL ONLY BE USED FOR BILGE CLEANING. ALLIED FORMULA P-98 BILGE CLEANER/SHORT-LIVED DETERGENT HAS BEEN TESTED AND FOUND TO BE COMPATIBLE WITH ALL OWS'S AND OCM'S. ALLIED P-98 IS IDENTIFIED BY NSN 6850-01-278-4420 (55 GAL DM), 6850-01-278-3858 (30 GAL DM), AND 6850-01-278-4421 (5 GAL CN). MIL-D-16791 GENERAL PURPOSE DETERGENT HAS ALSO BEEN FOUND TO BE COMPATIBLE WITH OWS'S AND OCM'S AND IS ALSO RECOMMENDED FOR USE. MIL-D-16791 IS AVAILABLE UNDER NSN 9Q7930-00-282-9699 (1 GAL CN), 9Q7930-00-985-6911 (5 GAL CN), AND 9Q7930-00-282-9700 (55 GAL DM).

7. AQUEOUS FILM FORMING FOAM (AFFF) SHALL NOT BE USED AS A BILGE OR EQUIPMENT CLEANING AGENT. AFFF IS A SURFACTANT THAT CREATES A STRONG CHEMICAL EMULSION THAT IS RESISTANT TO OIL/WATER GRAVITY SEPARATION. THIS EMULSION COATS THE POLYPROPYLENE PLATES WITHIN THE OWS AND INHIBITS THE COALESCENCE OF OIL DROPLETS ON THE PLATES ALLOWING OIL DROPLETS TO PASS THROUGH THE SEPARATOR. AFFF CAN ALSO COAT THE OWS'S PRIMARY AND BACK-UP OIL SENSORS AND CAUSE THEM TO FAIL. IN SHORT, AFFF SIGNIFICANTLY DEGRADES OWS PERFORMANCE. THE DISCHARGE OF AFFF TO BILGES SHOULD BE LIMITED TO REQUIRED OPERATIONAL INSPECTIONS AND EMERGENCIES. IAW REF A, OILY WASTE THAT CONTAINS CHEMICAL EMULSION AGENTS SHALL BE OFFLOADED TO SHORE RECEIVING FACILITIES. SEE DICHARGE EXEMPTIONS OF REF A IF DISCHARGE OF AFFF CONTAMINATED BILGE WATER IS REQUIRED AT SEA.

8. OPA EQUIPMENT SHOULD BE USED REGULARLY. INTERMITTENT AND INFREQUENT USAGE WILL RESULT IN HARDWARE DEGRADATION. CURRENT PMS PERIODICITY FOR CLEANING OF PARALLEL PLATES IS BEING REVIEWED. MORE FREQUENT PMS CLEANING MAY BE REQUIRED TO ENSURE OPTIMUM FUNCTIONING OF THE OWS. A COMMON CAUSE OF HIGH OIL CONTENT IN THE EFFLUENT FROM THE OWS IS SLUDGE COATED PARALLEL PLATES. NON-OIL CONTAMINANTS AND HAZARDOUS MATERIALS CANNOT BE PROCESSED BY THE OWS AND CAN INTERFERE WITH THE PROPER FUNCTIONING OF THE OWS. BILGES SHOULD BE KEPT FREE OF SYNTHETIC OILS AND HYDRAULIC FLUIDS, ETHYLENE GLYCOL ENGINE COOLANTS, AFFF, SURFACTANTS AND ORGANIC SOLVENTS. THESE TYPES OF WASTE MUST BE HELD AND PUMPED TO A SHORE FACILITY. BILGE CONTENTS DIRECTLY AFFECTS OWS PERFORMANCE.

9. NAVSEA IS DEVELOPING A SHIPBOARD MEMBRANE POLISHING SYSTEM FOR OWS EFFLUENT THAT WILL PRODUCE AN OVERBOARD DISCHARGE CONTAINING <15PPM OF OIL. A PROTOTYPE SYSTEM IS INSTALLED ON DDG 64, USS CARNEY, AND HAS CONSISTENTLY REMOVED 99% OF POST OWS OIL. THIS SYSTEM WILL ENABLE THE FLEET TO MEET WORLD WIDE OIL POLLUTION PREVENTION REQUIREMENTS.

10. NAVSEA HAS BEGUN AN INSPECTION AND CERTIFICATION PROGRAM FOR OPA EQUIPMENT AND SYSTEMS IAW REF A, DOD AND FEDERAL REGULATIONS. THE CERTIFICATION PROGRAM IS APPLICABLE TO ALL U.S. NAVY SURFACE

SHIPS IN WHICH SHIPBOARD OPA EQUIPMENT AND SYSTEMS ARE CURRENTLY INSTALLED OR ARE BEING INSTALLED. OPA EQUIPMENT AND SYSTEMS INCLUDE THE OWS, OCM, OWHT, OILY WASTE TRANSFER SYSTEM, WOT AND THEIR ASSOCIATED COMPONENTS. THE CERTIFICATION PROGRAM ENSURES THAT OPA EQUIPMENT HAS BEEN PROPERLY INSTALLED AND MAINTAINED AND THAT IT IS OPERATIONAL. OPA EQUIPMENT IS INSPECTED AND CERTIFIED DURING NEW CONSTRUCTION OR DURING EQUIPMENT INSTALLATION. SYSTEMS THAT ARE CURRENTLY INSTALLED ARE PERIODICALLY INSPECTED EVERY 24 MONTHS AND RECERTIFIED EVERY FIVE YEARS BY THE TYCOM.

11. REF B ESTABLISHED THE CALIBRATION PROGRAM FOR THE ET-35N OCM. THE ET-35N OCM REQUIRES CALIBRATION AFTER 2000 OPERATING HOURS. THIS PROGRAM WILL PROVIDE FULLY CALIBRATED KITS TO THE FLEET. CALIBRATION OF THE ET-35N IS ACCOMPLISHED BY REPLACING THE SAMPLE AND DETECTION ASSEMBLY AND PROCESSOR PCB WITH THOSE FROM A CALIBRATION KIT. THE CALIBRATION KITS CAN BE OBTAINED FROM NSWCCD-SSES. THE OLD COMPONENTS ARE TO BE SHIPPED BACK TO NSWCCD-SSES.

12. TRAINING IN EQUIPMENT OPERATION AND MAINTENANCE IS AVAILABLE THROUGH TRAINING COURSE K-652-2196 OFFERED AT THE FLEET TRAINING CENTERS. ONBOARD TRAINING IS ALSO PROVIDED AS PART OF THE CERTIFICATION INSPECTION PROCESS. SUPPLEMENTAL TRAINING VIDEOS ARE BEING DISTRIBUTED VIA THE CERTIFICATION PROGRAM OR CAN BE ORDERED BY CONTACTING THE POCS LISTED BELOW. FURTHER PROGRAM AND EQUIPMENT INFORMATION IS AVAILABLE AT THE NAVY SHIP ENVIRONMENTAL INFORMATION CLEARING HOUSE WEBSITE AT [WWW.NAVYSEIC.COM](http://WWW.NAVYSEIC.COM) AND THROUGH THE SHIPBOARD ENVIRONMENTAL PROTECTION NEWSLETTER.

13. CONCLUSION/INFLUENT MANAGEMENT AND PROPER EQUIPMENT MAINTENANCE ARE CRUCIAL FOR OPTIMUM OPA EQUIPMENT PERFORMANCE. NAVSEA HAS INITIATED PROGRAMS TO ENSURE THAT THE SYSTEMS ARE OPERATIONAL AND MAINTAINED PROPERLY BUT COOPERATION AND DEDICATION BY THE FLEET USER IS ESSENTIAL FOR THE SUCCESS OF THESE PROGRAMS.

14. NAVSEA POINT OF CONTACT IS MR. BRAD SMITH SEA 03L12. 703-602-8144 X202. NSWC PHILADELPHIA POINT OF CONTACT IS MR. TONY MORALES NSWCCD-SSES CODE 631 (215) 897-7697.

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